



MEDIATEK

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Ms. Marlene H. Dortch,
Secretary, Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Unlicensed Use of the 6 GHz Band, ET Docket No. 18-295; Expanding Flexible Use in Mid-Band Spectrum between 3.7 and 24 GHz, GN Docket No. 17-183;

Ms. Dortch,

MediaTek USA Inc. (“MediaTek”) submits these comments in response to the Commission’s Notice of Proposed Rulemaking (“NPRM”) in the above-referenced proceedings in which the Commission seeks input on unlicensed use of the 5.925-7.125 GHz (“6 GHz”) band. MediaTek applauds the Commission for initiating this proceeding and urges the Commission to move quickly to adopt rules allowing unlicensed access to the 6 GHz band, including authorizing low-power, indoor-only (“LPI”) and very low power (VLP) device classes across the entire band, and permitting standard-power operations in designated segments of the band.

MediaTek is the world’s 4th largest fabless semiconductor company and powers more than 1.5 billion devices a year. MediaTek has a great deal of experience and interest in Wi-Fi’s continued success, as we have the largest Wi-Fi chip market share in the mobile, tablet, retail router, consumer electronics and broadband gateway segments.

The modern Wi-Fi ecosystem consists a wide range of Wi-Fi products and enables many innovative use cases under various business models. For example, some burgeoning applications that MediaTek expects enabled by products from the 6GHz device-classes, are:

- Very Low Power (VLP) devices: short-range, high-bandwidth applications like uncompressed 8k video casting, “last meter” AR/VR wireless connectivity, and direct peer-to-peer file sharing
- Low Power Indoor (LPI) devices: address the bulk of the consumer mobile and transportable operations segment, which are deployed singly or in very small groups, exclusively indoors.

As a high volume wireless chip set provider, MediaTek recognizes the growing popularity of Wi-Fi consumer products and its increasing attach rate in numerous expanding use cases and devices and the importance of the critically needed additional spectrum access in support of growing demand.

In addition to enabling broadband access in homes and businesses, Wi-Fi is essential for cellular traffic offload which extends carrier networks' coverage and enables ubiquitous broadband, low-latency connections.

The 6 GHz band is uniquely suited to facilitate the continued success and future growth of Wi-Fi with radiofrequency propagation characteristics of the 6 GHz band that are similar to the adjacent 5 GHz band. Moreover, the proximity of the 6 GHz band to the 5 GHz band means that existing devices can be readily redesigned for expanded frequency range to operate in the new band.

The 6 GHz band also offers contiguous spectrum blocks to accommodate additional 160 megahertz channels, which are required for high-bandwidth applications, such as high-definition video streaming and virtual reality. Additionally, the future IEEE 802.11be standard is currently specifying 320MHz channels which will be enabled by the new available spectrum.

In particular, MediaTek urges the Commission to consider the issues of importance to the Wi-Fi market:

- Allow LPI operations across the *entire* 6 GHz band, including the U-NII-5 and U-NII-7 bands, without an unnecessary automatic frequency coordination ("AFC") requirement for those bands.
- In recognition of the growing necessity and widespread of portability and mobility use cases, allow mobile and transportable U-NII operations at very low power transmit power levels.
- Allow client devices that operate under the control of an AP to operate at the similar power level as the AP.

It is of critical importance that no additional restrictions imposed on the LPI and VLP devices to allow them similar operations as in 5GHz.

MediaTek appreciates the Commission's effort in this matter and urges the Commission to complete this proceeding and make needed unlicensed spectrum available to support Wi-Fi technology performance and evolution.

Respectfully submitted,



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President
MediaTek USA, Inc.